



AVILOO MAGAZINE | SPRING/SUMMER – 2025



AVILOO CERTIFIED

Independent Battery Test for
even more transparency
in used EV purchases

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THE AVILOO REMARKETING STUDY

Expert Opinion by
Nikolaus Mayerhofer

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LOADED VEHICLE CARRIERS & EV RANGE

Tips & Tricks

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INNOVATION AWARD 2024

Prestigious
Award for AVILOO

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connect to detect

aviloo.com

MORE MARGIN ON EV SALES

You know the problem?

Selling and managing used EVs is incredibly challenging. Without clear data, the battery condition remains a mystery, pricing is uncertain, and your customer hesitates - with good reason.

With AVILOO, it's easy:

In just three minutes, you get an independent battery certificate that shows what your EV is really worth. Plug in, wait, impress - and earn trust.



More Trust

Strengthen your customer relationships sustainably.



Optimal Selling Price

Transparent battery assessment for maximum customer value.



Faster Sales

Less uncertainty, shorter time on the lot.



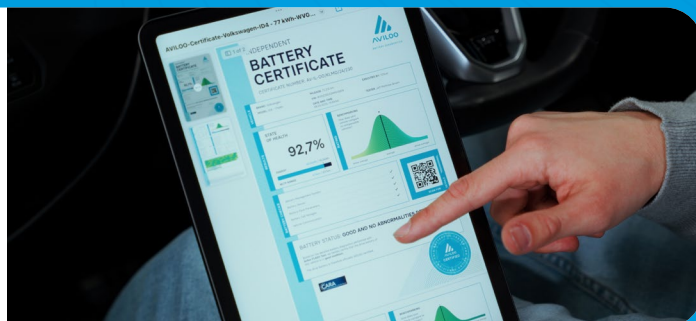
Maximum Transparency

Brand-independent diagnostics for all models.

THREE MINUTES. ONE CERTIFICATE.



MORE INFORMATION ABOUT
THE FLASH TEST - [HERE](#)



MINIMAL EFFORT. MAXIMAL PROFIT.

1

Order

The AVILOO Case contains all necessary components.

2

Connect

Plug the AVILOO Box into the vehicle.

3

Test Run

In three minutes, our system delivers precise results.

4

Retrieve Results

The AVILOO Battery Certificate is immediately available.



Dr. Marcus Berger,

AVILOO CEO

IMPRESSUM

AVILOO B2B Magazine
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Note: For the sake of better readability, we refrain from using gender-specific punctuation or special characters in our texts and instead use the masculine form. However, all personal terms refer to individuals of all genders.

EDITORIAL

Dear Reader,

As a pioneer in the field of battery diagnostics, we at AVILOO have pursued a clear mission from the very beginning: to make visible what was previously hidden. Our independent battery diagnostics provide end customers, dealers, and fleet operators with transparent and precise insights into battery health. With our new battery certificate, AVILOO once again reinforces its position as market leader and takes battery diagnostics to a whole new level.

Despite its enhanced capabilities, the improved FLASH Test remains as easy to use as ever – ensuring maximum efficiency for dealers, leasing companies, and fleet operators. The new AVILOO CERTIFIED quality seal sends a strong signal of verified safety, transparency, and trust in the used EV market, for both buyers and sellers. The growing demand for transparency is also confirmed by our recent AVILOO Re-marketing Study. It's a clear competitive advantage, that our customer Manheim Express is already using successfully.

Another milestone: out of more than 150 submissions, AVILOO was named the winner in the "Electromobility & Innovative Drive Technologies" category at Automechanika Frankfurt. The overwhelmingly positive feedback we received at Messe Frankfurt – directly from our customers – truly energizes us and confirms the core mission of our work. It's what drives us to keep shaping the future of e-mobility and to continue pushing the boundaries of innovation.



THE NEW AVILOO FLASH TEST

CERTIFICATE AS A GAME CHANGER IN THE USED EV MARKET

AVILOO sets new standards in battery diagnostics once again

Transparency, trust, and technological precision – AVILOO is once again setting new standards in battery diagnostics for electric and plug-in hybrid vehicles with its enhanced FLASH Test, available from the end of Q2 2025. The independent battery certificate provides clear, data-based results, enabling both buyers and sellers to make informed decisions. Despite the technological upgrade, the test remains as fast as ever – the certificate is delivered straight to your inbox just three minutes after connecting the test box.

WHAT'S NEW ABOUT THE FLASH TEST?

The latest software update introduces several key improvements that make the FLASH Test even more powerful, transparent, and user-friendly:

More Precise SoH Values (State of Health):

Thanks to an expanded database and refined algorithms, AVILOO now delivers even more accurate results. The maximum deviation is only $\pm 3\%$, reinforcing AVILOO's position as the global industry standard for safe battery diagnostics.

Benchmarking: For the first time, the new certificate compares the tested battery to similar vehicles, based on factors like battery size, mileage, or other relevant similarities. Drawing from the world's largest battery database, AVILOO experts can now provide reliable comparative analysis.

Heatmap Analysis: A new "heatmap" visualization now highlights cell defects. This cell voltage diagram instantly shows how many and which cells are affected and how severe the issues are – offering added clarity even for non-experts.

Range Display: For the first time, the FLASH Test also indicates the vehicle's actual achievable

FLASH TEST REPORT PREVIEW

BATTERY CERTIFICATE PREVIEW

CERTIFICATE NUMBER: 2DFFD989-491D-410C-****-*****

BATTERY DIAGNOSTICS

BRAND: Volkswagen

MODEL: ID4 - 77kWh

MILEAGE: 72,215 km

DATE AND TIME: 08.03.2025, 15:59:54

EXECUTED BY: 123car

STATE OF HEALTH

92,7%

ENERGY 68,6kWh | 74,0kWh

WLTP RANGE 479km | 517km

BATTERY CHECKS

- Battery Management System ☒
- Battery Sensor ☒
- Battery Pack Parameters ☒
- Battery Cell Voltages ☒
- Vehicle Communication ☒

BATTERY STATUS: GOOD AND NO ABNORMALITIES DETECTED

Based on the detailed battery diagnostics performed with Avilo FLASH Test, we hereby certify that the drive battery of this vehicle is in **good condition**. The drive battery is therefore officially AVILOO certified.

Dr. Marcus Berger, CEO

For more information about this test, visit: aviloo.com/ft-preview
Scan the QR code to get the original report.

driving range – compared with both the WLTP value and the average range of similar models from the AVILOO database.

New Design & Quality Seal: The revamped certificate features a new design and, for the first time, includes the AVILOO CERTIFIED quality seal – a symbol of risk-free used EV purchases, transparency, trust, and safety. To understand the certificate has never been easier.

AVILOO PREVIEW: The updated FLASH Test now includes a compact, easy-to-understand preview of the battery certificate. It provides visibility and confidence by confirming that the traction battery has been technically inspected, displaying and visualizing the State of Health, and verifying key battery functions.

A MAJOR UPGRADE FOR THE USED CAR MARKET

Best of all: the update is free for all existing license holders and activates automatically. Whether car dealers, fleet operators or leasing companies – they all benefit from the new features. Especially economically: according to AVILOO, end customers pay on average between € 550 and € 1,100 more for certified vehicles. Moreover, 57 % of buyers originally interested only in new cars would consider used EVs if they come with a certificate.

A TRUE GAMECHANGER

AVILOO CEO Marcus Berger sums it up:

"The new AVILOO FLASH Test – the industry standard in its segment – takes battery diagnostics to a whole new technological level. It delivers maximum safety and is a true gamechanger for the used EV market."

With this update, AVILOO once again underscores its market leadership and significantly boosts sales potential and transparency in the booming used EV market. The AVILOO PREMIUM Test is set to receive its final upgrade by early 2026.

THE AVILOO CERTIFICATE PROVIDES THE KEY RESULTS IN A COMPACT TWO-PAGE FORMAT.



MORE ON THE TOPIC
HERE



HOW USED EVS SELL BETTER – THE AVILOO REMARKETING STUDY

The electric vehicle market is booming, and not just for new cars. Used EVs and plug-in-hybrids are also seeing growing demand. But with this development comes an increasing need for guidance, security, and transparency – especially when it comes to the heart of every electric vehicle: the battery.

TRANSPARENCY AS THE KEY TO SUCCESS

As part of a comprehensive, Europe-wide market study – the AVILOO Remarketing Study 2024 – consumer behavior in the used EV market was closely examined. At the center was one key question: What influence does an independent battery certificate have on purchasing decisions? The results speak for themselves. A total of 913 end customers and potential buyers shared insights into their expectations and decision-making processes when purchasing used EVs and plug-in-hybrids.

A CERTIFICATE THAT MAKES ALL THE DIFFERENCE

One of the study's core findings: buyers are willing to pay significantly more if they receive a battery certificate in return. Depending on the market and customer segment, the average willingness to pay ranged between € 550 and € 1,100.

Moreover, a battery certificate dramatically broadens the potential customer base: 57 % of study participants initially considered only new vehicles but said they would be open to purchasing a used EV, if a meaningful and independent certificate on battery condition was available. **According to the study, the likelihood of successfully selling a used EV increases by an impressive 36 % when a battery certificate is included.**

DEALER TRUST AND COMPETITIVE EDGE

These findings are especially relevant for car dealers. The study shows that 81 % of customers place significantly more trust in a dealership that offers a battery certificate. Even more striking: 75 % of respondents now expect such a certificate as a standard when buying a used EV. The takeaway: those who do not offer a battery certificate risk not only losing potential buyers – but also weakening their competitive position. The transparency enabled by an objective testing process like AVILOO's builds trust and significantly accelerates the sales process.



CHART 1
PRICE PREMIUM ACCEPTANCE BY COUNTRY WITH THE
PRESENTATION OF A BATTERY CERTIFICATE

GOOD TO KNOW

Customers are willing to pay a higher price if they are provided with a battery certificate as part of their purchase. The accepted surcharge ranges from € 550 to € 1,100, at least. See Chart 1.

The real-world impact of battery certification is clearly demonstrated by the example of Manheim Express Europe, a leading used car auction platform and subsidiary of the Cox Automotive Group. Since partnering with AVILOO, Manheim Express has incorporated the battery test certificate into the valuation and remarketing of EVs – with resounding success. In just nine months, the following results were achieved:

- **+29,3 % more bids per vehicle**
- **+22,4 % more active bidders**
- **+33,4 % higher sales rate**

These publicly shared figures confirm: transparency isn't just a selling point – it's a true revenue driver. Customers appreciate the combination of security, reliability, and clear pricing – all of which are made possible by an independent battery certificate.

* n=913, survey period: 06-07/2024, online study in Germany, Austria, Belgium, France, United Kingdom, Norway and Sweden – Van Westendorp method.



„For an electric vehicle, mileage and range are not decisive. The only thing that matters is the current condition of its battery.“

NIKOLAUS MAYERHOFER,
AVILOO CTO

NIKOLAUS MAYERHOFER,
WITH THE AVILOO BOX



CONCLUSION: THE FUTURE OF THE USED MARKET IS CERTIFIED

Market developments make one thing clear: the health of the battery is the key factor in purchasing decisions for used EVs. Without transparent battery information, there's no trust – and without trust, no sale. A certified battery test provides buyers with the confidence they need and gives sellers the ultimate selling point in a competitive market. With its manufacturer-independent testing solution, AVILOO has created a tool that combines transparency, efficiency, and trust – paving the way for a successful future in the used EV business.



STAY
UP TO DATE

Follow our observations and insights on e-mobility on our blog



e-car remarketers' sales opportunities increase by

36 %

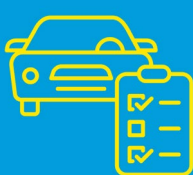
when they market used cars equipped with a battery test certificate – in comparison to not offering it.



Customers are willing to pay at least

€ 550 – 1,100

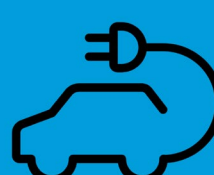
more for used e-cars and hybrid plug-in vehicles, equipped with an independent battery report or certificate.



Many potential e-car buyers would only consider to buy a new vehicle – however

57 %

of them would consider buying a used e-car, when it comes with an independent battery report or certificate.



75 %

of used e-car buyers expect an independent battery report.



81 %

of used car buyers consider car dealers offering an independent battery report to be particularly trustworthy.

SUNNY RANGE AND WINTER WARMTH: CREATIVE EV-TRICKS



Tip 1 Moderate Driving Style

A calm driving style - avoiding rapid acceleration and braking - is beneficial not only for preventing accidents on icy roads but also for conserving the battery of your electric vehicle. Additionally, using Eco mode, which is integrated in many electric cars, helps save energy.



Tip 2 Correct Charging

To protect your battery in cold weather, it is recommended to avoid fully charging or completely draining the vehicle. The optimal charge range is between 20 % and 80 %. If the vehicle is parked for extended periods, it is best to maintain a charge level around 50 %.

Frequent rapid charging also puts a high load on the battery and should be avoided, especially in winter.



Tip 3 Regular Battery Tests

AVILOO recommends conducting regular battery tests to assess vehicle usage and detect potential damage early. These tests help identify performance deviations that may signal underlying issues. This is particularly important in winter, as battery performance can affect vehicle behavior and pose risks to the driver.

Start the new season safely and comfortably!

STAY UP TO DATE!

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on AVILOO Blog



Falling temperatures pose certain challenges for electric cars. Similar to mobile phone batteries, the batteries in electric vehicles lose their energy more quickly in cold conditions. This is because the chemical processes within the battery slow down at low temperatures, causing a drop in voltage. In other words, the battery becomes less efficient.



Tip 4 **Protection from Environmental Influences**

Both people and electric cars perform best at an ambient temperature of around 20 degrees Celsius. Extreme cold and heat can lead to battery issues in your vehicle. To prevent this, it is advisable to park your electric car in a garage, multi-story car park, or at least in a car-port sheltered from the wind during icy temperatures. Additionally, it is important to switch to winter tires when temperatures drop below 7 degrees Celsius. Due to the higher weight of electric cars, they exert more pressure on the tires, so this should be considered when selecting tires.



Tip 5 **Preconditioning**

Preconditioning refers to warming up or cooling down the battery in preparation for the charging process. It helps prevent battery defects and premature aging, especially in low temperatures. To minimize charging cycles, it is advisable to connect the vehicle to the mains during preconditioning, as this reduces the need to draw power from the battery. Preconditioning is particularly important for fast charging. Modern electric vehicles now feature an automatic preconditioning function that activates when approaching the next charging station. This not only protects the battery but also speeds up the charging process.



Tip 6 **Efficient Heating**

Heating consumes the most energy in an electric car, and there are significant differences depending on the heating system used. For example, an electric resistance heater consumes more energy than a heat pump. To save electricity without freezing, you can turn on the heating 30 minutes before departure. The vehicle should remain connected to the power supply to save additional charging cycles and energy. Short trips can also be made more comfortable by using the steering wheel and seat heaters.

LOADED VEHICLE CARRIERS AND EV RANGE

FACTS – TIPS – RECOMMENDATIONS FROM AN AVILOO STUDY

You're planning a family vacation with your electric car, and your bikes are a must-have. Of course, you know how your car performs in everyday life - you're familiar with its range inside and out and know exactly when to take charging breaks.

But what happens in special situations, like a holiday trip with loaded carriers for bikes or skis? Will your journey to that lovely vacation spot stay relaxed, or will you be caught off guard by totally different charging and break requirements?

EV range is a huge topic of discussion - especially when it comes to using loaded vehicle attachments.

That's because the range experiences of your usually „unloaded“ daily drives might no longer apply. There's a lot of uncertainty, and you'll often come across all sorts of claims that aren't backed by any reliable measurements.

To investigate the myths around EV consumption with loaded vehicle racks - and to debunk them with real facts - we conducted an extensive study on this relationship. The goal of our case study was to compare the energy consumption (measured in kWh) of an electric vehicle in three different scenarios.





TEST PARAMETERS AND SCENARIOS

To ensure reproducible test conditions and valid results, we carried out a total of 12 trips using a VW ID.4 in the SUV vehicle class. To avoid traffic jams or disruptions, we hit the Austrian autobahn during hours when most people are still enjoying their sleep. For each of our nighttime test runs on a selected section of the A2 highway, we strictly adhered to and monitored fixed parameters.

Our self-controlled test constants included:

Precisely maintained speeds using cruise control, summer tires, heating and air conditioning turned off, windows closed and consistent tire pressure.

External conditions throughout testing were:

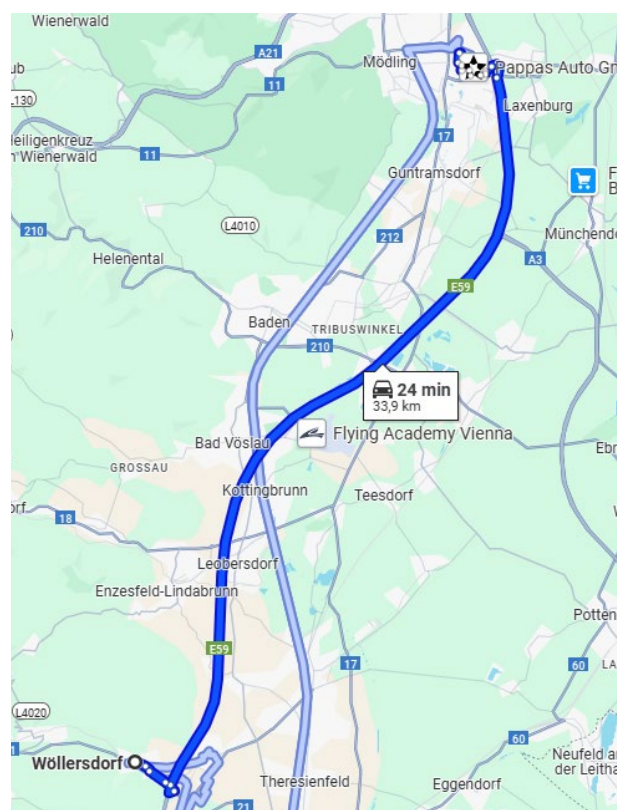
Dry road surface and wind speed below 15 km/h.

Our total test route (60 kilometers) was located south of Vienna, running along the north-south axis between Wiener Neudorf (at 195 m above sea level) and Wöllersdorf (320 m above sea level). This consistently identical route began and ended at the respective highway on- and off-ramps.

First (Scenario 1), we tested the required „effort“ of the ID.4 without any attachments or bikes as luggage.

In the second and third scenarios, we measured energy consumption with a bike rack loaded with three 28-inch trekking bikes — once mounted on the rear (Scenario 2) and once on the roof (Scenario 3).

To compensate for unpredictable wind and the elevation differences along the route, we deliberately included data from both the outbound and return trips in our calculations.



Entire test route Wr. Neudorf – Wöllersdorf – Wr. Neudorf, 60 kilometers (there and back)

MEASUREMENT COMPARISON OF THE THREE SCENARIOS

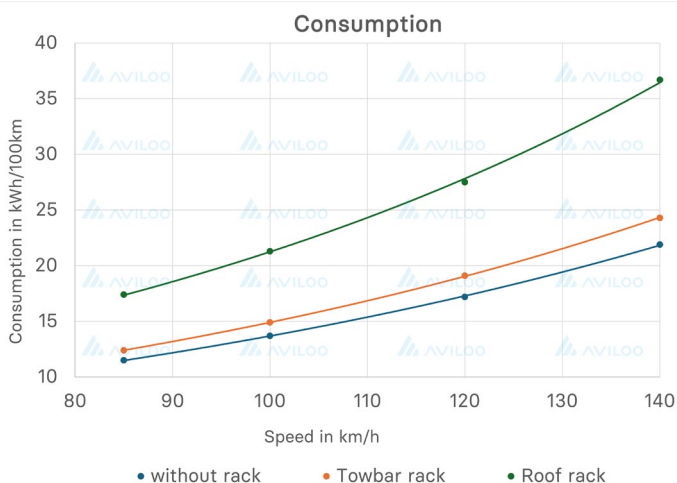
The nighttime drives by AVILOO CTO Nikolaus Mayerhofer and his engineering colleague were well worth the effort, as the results and insights are surprising and so clear-cut that AVILOO can derive concrete recommendations for all EV drivers. But first, here are the general comparison results. Graphic 1 shows the measurements from the three scenarios (4 trips per scenario) at speeds up to 140 km/h. It's no surprise that the four trips without luggage or carriers had the lowest kWh consumption per 100 km. What really stands out, however, is the large difference in consumption between Scenarios 2 and 3 — a difference that becomes even more pronounced at higher speeds. Also noteworthy is the very small difference between the curve for the unloaded car (blue, "without") and the test curve with the rear-mounted rack (orange, "rear rack"). To avoid time loss and stress on your vacation trip with bike luggage - for example, from searching for charging stations or needing more frequent and longer charging stops - you would need to drive at a consistently lower speed.

RESULTS FOR THE ROOF-MOUNTED BIKE RACK

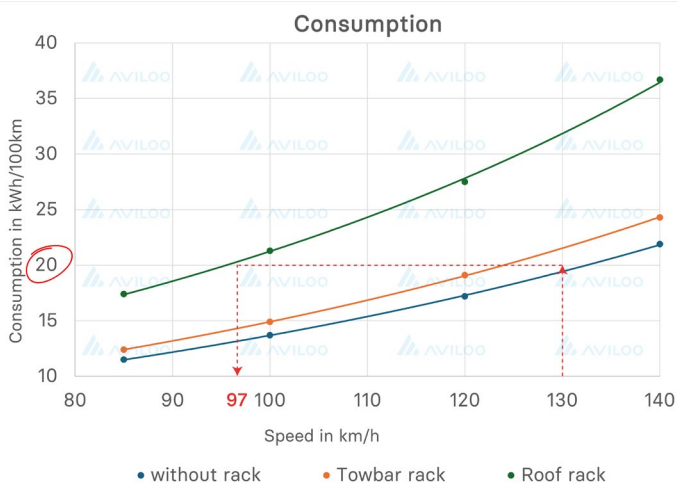
How much you would need to reduce your speed when using a roof rack with luggage in order to maintain your usual energy consumption and travel habits is shown in Graphic 2, indicated by the red arrows. If, for example, you typically like to drive at 130 km/h, this calculation shows what speed you would need to drive at to achieve the same energy consumption or range that you're used to in everyday driving without a roof rack. In this example, the required speed would be 97 km/h.

INSIGHTS ON THE REAR-MOUNTED BIKE RACK

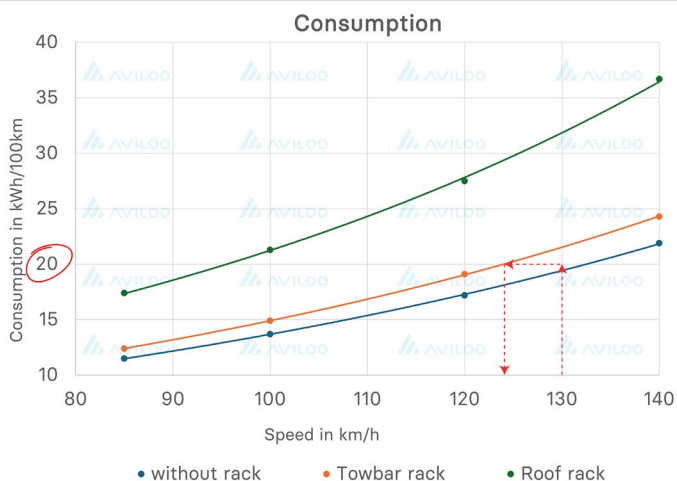
What's truly impressive by comparison is the same analysis applied to the use of a loaded rear-mounted bike rack on the tow hitch. The advantage and positive difference compared to the roof-mounted version are striking. The driver in our Scenario 2 can maintain their usual, everyday „comfort zone“ driving style (without a luggage rack), as well as their regular break and charging habits, with just a small adjustment of 7 km/h in speed. By slightly - and very acceptably - reducing speed from 130 to 123 km/h, you can achieve the same familiar range as during a trip without any rack or luggage at all (Graphic 3).



Graphic 1: Different kWh Consumption of the EV over 60 km – 3 Scenarios



Graphic 2: Travel speed would need to be reduced by 33 km/h in order to achieve the same energy consumption over 100 kilometers with roof luggage as without any vehicle attachments.



Graphic 3: Speed only needs to be reduced by 7 km/h in order to achieve the same energy consumption with a loaded rear-mounted bike rack as without any rack or luggage.



AVILOO'S CONCLUSION AND RECOMMENDATION

When using transport systems - such as those loaded for recreational activities - the already very high efficiency of an EV remains unchanged. We want to clearly debunk the vague claims and mythical stories surrounding this topic. Thanks to our study and the verified measurements, we can demonstrate and confirm for interested EV drivers, and those considering making the switch, that the additional consumption caused by mounting luggage on a tow hitch at the rear of the vehicle, i.e. in the slipstream, can be considered very low. With a minimal speed reduction of just 7 km/h, energy consumption even matches that of driving without any carrier or luggage at all.

Our examples, carried out with a representative, typical family vehicle, vividly show the significant impact roof-mounted luggage has on kWh consumption — which leads us to clearly recommend using rear-mounted carriers for EVs. Arriving at your holiday destination stress-free and ensuring a relaxed return trip — both of these are things that may not be compatible with a grueling 97 km/h cruising speed.



„We want to provide clarity with our investigation. There are many half-truths surrounding the issue of increased consumption due to loading. Our measurements clearly show that the carrier load at the rear of the vehicle has hardly any effect on range and driving habits.“



PHYSICS

It's hardly surprising that driving faster means higher energy consumption. What may be new to many, however, is that consumption (kWh/100 km) increases nonlinearly with speed. The reason for this nonlinear consumption behavior is the effect of air resistance. Simply put, doubling your speed doesn't double the energy consumed due to air resistance it quadruples it.

DEGRADATION

SIMPLE STRATEGY FOR DETECTING ACTUAL BATTERY DEGRADATION

Yes, dear EV drivers, you have a significant influence over the aging and degradation of your valuable vehicle battery. The good news is that you can very easily monitor the aging process of your EV's battery and optimize it through your behaviour. With AVILOO battery tests – PREMIUM or FLASH Test – you can not only determine the current State of Health (SoH), but also explore the aging process of your EV battery. Read on to learn which specific aspects and facts you should pay attention to. We have developed calculation models based on AVILOO Big Data and conducted numerous real-life measurements, which have provided us with valuable insights into battery aging and led us to formulate recommendations for you. The measurement graphs shown below (depicting real vehicle analyses) illustrate different types of aging phenomena, including some with linear and others with sharply declining degradation curves.

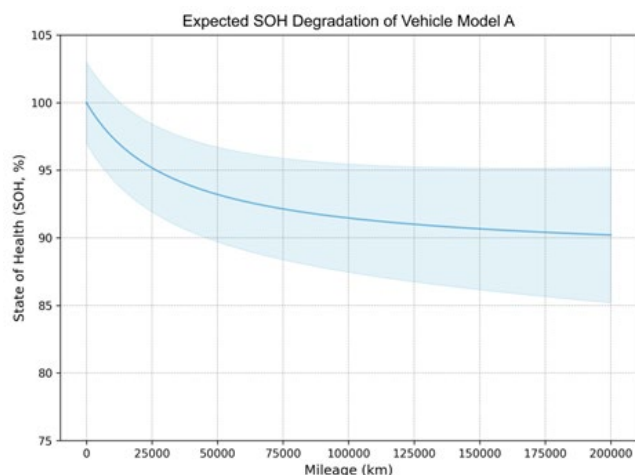
THE IMPORTANCE OF THE INITIAL VALUE – WHY EARLY BATTERY TESTING MATTERS

Point 0 on the mileage axis in our graphs represents the new condition of the vehicle (graph for Model A). In practice, our AVILOO measurements show that the State of Health (SoH) indicated by the manufacturer often does not start at 100 %. It's important to distinguish between two scenarios. For some vehicles, the average SoH is already below 100 % at the time of purchase. The reasons for this can only be speculated. Possible explanations include: Unrealistically optimistic values of individual cells are extrapolated to the entire battery, causing the actual SoH to appear too low in real-world measurements. Conversely, manufacturers might intentionally understate values for warranty reasons, resulting in an SoH that appears too high. This can be seen in the graphs when the blue centerline at the new condition deviates from 100 %. Another reason for SoH values being too low or too high at the start is accepted manufacturing tolerances in cell capacity. Some batteries may store more or less energy than stated when new. This tolerance range is illustrated in the following graphs as a light blue band around the centerline. Because of these variations, it's crucial to carry out an initial, inde-

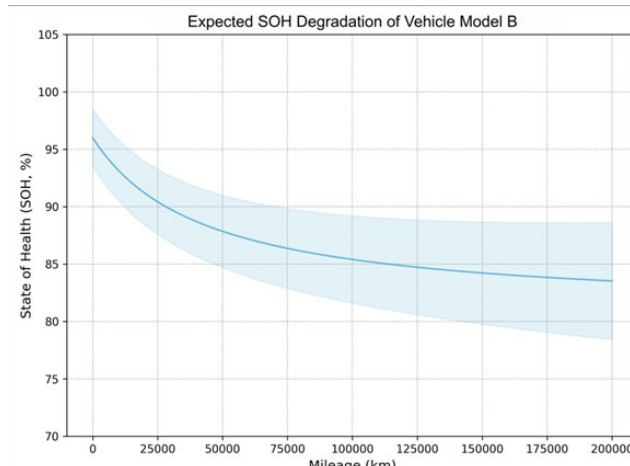
pendent measurement using an AVILOO PREMIUM or FLASH Test right when the vehicle is acquired. This provides a reliable baseline for evaluating battery aging and makes future measurements meaningfully comparable. Only by knowing the exact initial SoH value can the progression of degradation be assessed with accuracy. A representative degradation curve can only be determined after a second measurement, ideally after at least 20,000 km.

THE SECOND MEASUREMENT FOR A VALID DEGRADATION ANALYSIS

Battery degradation does not occur in a linear fashion. During the first years of operation, it can decline relatively steeply before reaching a more stable phase. To make an accurate assessment of battery wear, a second measurement after a minimum of 20,000 kilometers is necessary. Only through this comparison can the actual degradation rate be determined. The graph for Model B illustrates this with an example: If the manufacturer indicates an SoH of 100 % at the beginning, but the AVILOO measurement shows a real value of 97 %, this creates a crucial difference in evaluating degradation at the time of the second reading. If, after 25,000 kilometers, an SoH of 91 % is measured, this does not necessarily mean a loss of 9 percentage points, but only a 6 percentage point drop - based on the actual initial value. The graph for Model C shows the contrary behaviour. A word of explanation for correctly interpreting our graphs: As previously mentioned, the light blue area represents the variation in State of Health (SoH) among different vehicles of the same type. It becomes apparent that this variation increases with higher mileage, and this is where user behaviour comes into play. The light blue area reflects the 95 % confidence interval - meaning 95 % of vehicles fall within this range, while 5 % lie outside of it. The outliers typically include vehicles with serious defects or replaced batteries. To ensure that you're not purchasing such a vehicle, it is highly recommended to perform at least an AVILOO FLASH Test before buying.



GRAPH FOR MODEL A: Model A exhibits a “classic” aging curve. When new, the State of Health (SoH) is, as expected, at 100 %, with a spread of approximately ± 3 %. During the first 50,000 km, there is a somewhat accelerated aging process, which then transitions into a linear aging pattern up to 200,000 km. Beyond that point, the aging rate stabilizes at approximately 3 % per 100,000 km.



GRAPH FOR MODEL B: Model B exhibits a similar aging pattern to Model A. However, on average, it does not reach the storable energy specified by the manufacturer, resulting in the aging curve being lowered by approximately 4 %.

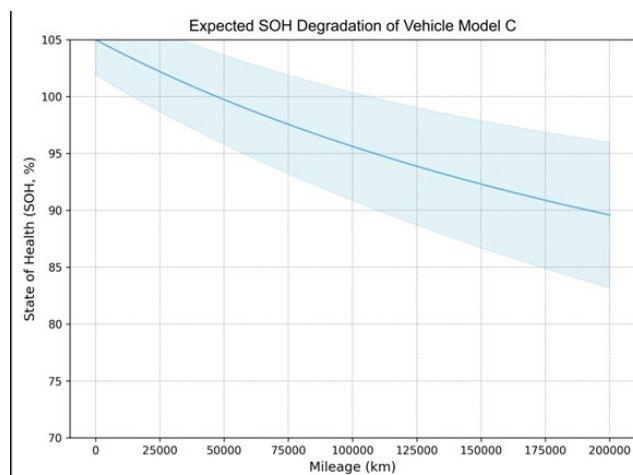
BENEFITS OF DEGRADATION MEASUREMENT AND RECORDING FOR NEW CAR OWNERS AND USED CAR BUYERS

This methodology offers several advantages:

- **For new car customers:** An initial AVILOO measurement of the starting value makes it possible to accurately track degradation over time.
- **For resale:** A documented degradation curve increases both the credibility and value of an EV on the used car market.
- **For used car buyers:** A transparent history of battery health provides confidence and serves as a significant quality criterion when purchasing.

PREDICTIVE MODELS FOR DEGRADATION AND LIFESPAN

AVILOO’s engineering experts are already working intensively on the development of models that, through the analysis of specific predictors, will enable forecasts of future battery degradation and State of Health (SoH) trends - referred to as the “Expected Remaining Lifetime.”



GRAPH FOR MODEL C: Model C behaves contrary to Model B in its new condition, but then exhibits an almost linear aging curve from the very beginning. As a result, an overall higher degradation rate of 6 % per 100,000 km must be assumed.

CONCLUSION

To accurately assess EV battery aging and degradation, conducting a State of Health (SoH) test when the vehicle is new - or at the time of purchasing a used vehicle - is essential. If a second independent AVILOO measurement is performed after a minimum of 20,000 km, using either the PREMIUM or the FLASH Test, a valid comparison of values becomes possible, enabling insights into the battery’s development over time. The combination of the respective actual SoHs forms the degradation curve, which allows conclusions to be drawn about the adequacy of the battery’s treatment.



HYUNDAI: USED ELECTRIC CARS – ENSURING SAFETY

Full transparency when buying used electric cars: Since May 1, 2024, Hyundai Motor Deutschland GmbH has been partnering with AVILOO GmbH. With the AVILOO FLASH Test, the company provides a quick and easy test that assesses the functionality of the traction battery in just a few minutes.

In 2023, Hyundai Motor Germany launched a pilot program in which the first Hyundai dealers were equipped with AVILOO battery diagnostic devices to provide customers with peace of mind when buying a used car. This service is now being gradually expanded to all Hyundai Promise locations. The independent AVILOO FLASH Test compares the actual usable energy of the battery with the energy available when the vehicle was new, providing an AVILOO score after a three-minute quick test. This score is derived from extensive test data and considers factors such as total energy consumption, charging and discharge cycles, and driving behavior through big data analysis. A higher measured value indicates better battery condition. If substantial risks are detected, the FLASH Test issues a 'red flag' report detailing the type and nature of the fault, protecting buyers from unpleasant surprises when purchasing a car.

„Our partnership with Hyundai is strategically important to us. Our corporate values and commitment to transparency align perfectly with the 'Hyundai Promise' program. We are therefore delighted to be the chosen partner for battery diagnostics.“

Dr. Marcus Berger, AVILOO CEO

The used car program 'Hyundai Promise - Tested Used Cars' provides customers with security, transparency, trust, and convenience when purchasing a used Hyundai or a third-party model from a participating Hyundai dealer. This initiative supports Hyundai Motor Germany's authorized dealers in professionalizing their used car business. Currently, there are 263 Hyundai Promise points of sale in Germany, and the number of dealerships participating in the program is steadily increasing. Last year, approximately 28,750 Hyundai Promise vehicles were sold.


„We are delighted to offer this special service to our customers throughout Germany. Equipped with the AVILOO FLASH Test, our Hyundai Promise dealers will be able to perform quick battery tests on vehicles of all ages and nearly all models.“

Tobias Krumnikl, Hyundai Motor Germany



ARVAL: ENHANCING TRANSPARENCY IN THE USED CAR MARKET

Just as the age and mileage of combustion engine vehicles significantly impact their performance and value, the condition of the battery plays a crucial role in determining the performance and value of an electric vehicle. Therefore, to successfully buy or sell a used electric vehicle, you need detailed information about the condition of its battery.



In its commitment to offering the best support for new mobility solutions - tailored to individual needs and all situations - Arval Germany has introduced regular vehicle tests in collaboration with AVILOO Battery Diagnostics. This means that vehicle batteries are now tested during every conventional general inspection using AVILOO's independent, manufacturer-neutral, and objective diagnostic procedure. Arval Deutschland GmbH has been utilizing this new service since October 2023.

KAUFENBATTERY DIAGNOSIS FOR SMART PURCHASING DECISIONS

AVILOO battery diagnoses provide a comprehensive picture of the battery's condition, showing its current state as a percentage compared to its new condition. This allows interested parties to gain precise insight into the remaining usable energy at the time of the test, based on the battery's original condition. Consequently, they can better estimate the range that the electric or plug-in hybrid vehicle can achieve and assess the value of the vehicle more accurately.

„With AVILOO as our new partner, we can provide interested parties with transparency and assurance regarding the battery status of an electric or plug-in hybrid vehicle, enabling them to make informed purchasing decisions. In this way, we aim to improve the marketing of our leasing returns for further life cycles.“

Christian Schüßler, Director Strategic Partnership, Arval Germany

„We are committed to transparency and clarity in the used e-car market. Our technology is neutral and highly accurate, as confirmed by various relevant organizations. We are very pleased to meet the strict and clear standards of a company like Arval.“

Dr. Marcus Berger, AVILOO CEO

With the new partnership, Arval Germany is once again expanding its service portfolio with an innovative offering, taking another step towards achieving the goals outlined in its strategic plan, Arval Beyond.

BECOME AVILOO PARTNER
HERE





AUTOMECHANIKA FRANKFURT: PRESTIGIOUS INNOVATION AWARD 2024 GOES TO AVILOO

During the Automechanika in Frankfurt, AVILOO was named the winner in the category „Electromobility & Innovative Drive Technologies“ by a 17-member panel of international experts. CEO Marcus Berger called the award a „recognition of our work, which gives us a special drive“.

STRONG COMPETITION WITH OVER 150 SUBMITTED PRODUCTS

2024 has been a remarkable year for AVILOO, with the Innovation Award standing out as a key moment. With its manufacturer-independent battery diagnostics test for electric cars and plug-in-hybrid vehicles, AVILOO stood out among over 150 products in the prestigious „Electromobility & Innovative Drive Technologies“ category. This innovative test assesses the State of Health (SoH) of used vehicle traction batteries and identifies defects. A distinguished jury comprising 17 international experts from media, testing institutions, associations, and evaluators meticulously reviewed the submissions. In the end, AVILOO, recognized as the global leader in battery diagnostics, emerged as the winner.

IMPORTANT PARTNER FOR THE FUTURE

AVILOO's CEO, Marcus Berger, expressed immense satisfaction, stating: „Considering the record number of applications since the award's inception and the remarkable quality of competitor products, we are especially thrilled to receive this recognition, which gives us a special drive.“. The accessibility and affordability of AVILOO's precise and rapid EV battery diagnostics were key factors in winning the award. This groundbreaking approach not only elevates the EV used-car market to new heights but also establishes AVILOO as an indispensable partner for those shaping the future of e-mobility, according to CEO Marcus Berger.

AVILOO SHOW

STAY IN TOUCH: CLOSE TO OUR CUSTOMERS

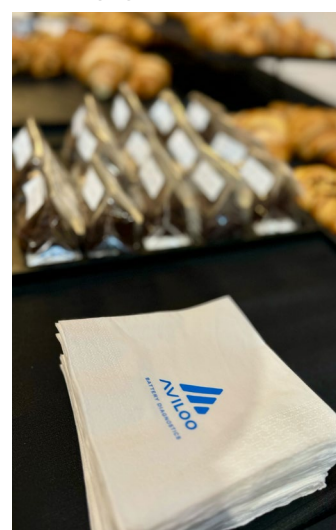
For AVILOO, open and direct communication with customers and technology enthusiasts is a top priority. We actively foster lively exchanges by participating in national and international trade fairs, conferences, and congresses.

Our goal is not only to ensure satisfied customers and the continuous development of our products but also to make the world of battery diagnostics tangible and experiential for you. To create unique AVILOO experiences, we aim to explore new and innovative approaches at trade fairs and conferences – ranging from lively discussions to captivating product presentations. A selected cross-section of our national and international appearances can be found below in this photo report.

AUTOMECHANIKA FRANKFURT



FLEET EUROPE MAILAND



DEUTSCHER REMARKETING KONGRESS



AUTO REMARKETING EVENT ELGERSMA



DEUTSCHER REMARKETING KONGRESS



AUTO REMARKETING EVENT ELGERSMA

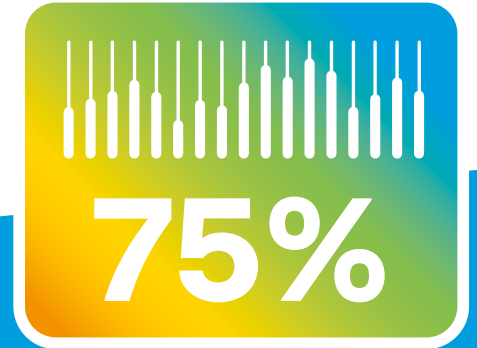
YOU CAN FIND
THE CURRENT EVENTS
HERE





BATTERY DIAGNOSTICS

connect to detect



STATE OF HEALTH (SoH)

BOOST YOUR PROFITS SELLING USED EVs

- Sell at a higher price and expand your base of potential buyers
- Provide AVILOO Battery Certificates – the industry standard
- AVILOO Box: Plug & Play in 3 minutes, no driving, no charging needed

